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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,183	11/07/2001	Daniel L. Gysling	CC-0124	7761

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HOUSTON, TX 77056-6582

EXAMINER	
KWOK, HELEN C	
ART UNIT	PAPER NUMBER

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,183

Applicant(s)

GYSLING, DANIEL L.

Examiner

Helen C. Kwok

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-2 and 4-25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3-9 and 14-17 (amended claims) of copending Application No. 10/011605 (Gysling). Although the conflicting claims are not identical, they are not patentably distinct from

each other because all of the limitations in the instant Application are claimed in the copending Application identified above. Hence, it would have been obvious to a person of ordinary skill in the art to have readily recognize the advantages and desirability of combining these claimed features in the copending Application to derive the presently claimed invention. Therefore, the claims in the instant Application are not patentably distinct from the claims of the copending Application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-2 and 4-25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 7-8, 14, 17-19, 23-24, 31-32, 35-38 of copending Application No. 10/636,095 (Gysling), in view of either U.S. Patent 6,354,147 (Gysling et al.) or U.S. Patent 6,601,458 (Gysling et al.).

With respect to claims, the copending Application essentially claims the featured elements presented in the instant Application. The copending Application claims a first sound speed meter, a second sound speed meter; and a signal processor for receiving a first and second sound speed signals for determining composition of a fluid mixture within a pipe. The only difference between the instant Application and the copending Application is the signal processor is used for determining density instead of composition. The references, Gysling et al. '147 and Gysling et al. '458, disclose sound speed meters and a processor for determining density. (See, column 2, line 59 to

column 3, line 9, column 8, lines 4-36 of '147; column 2, lines 32-43, 5, lines 26-39 of '458). It would have been obvious to a person of ordinary skill in the art at the time of invention to have readily recognize the advantages and desirability of determining density in lieu of composition from the sound speed signals since parameters, like density, composition and phase fractions, are related to one another and can be easily derive experimentally, analytically or computational from the sound speed signals from one parameter to another parameter. While the '147 and '458 references further suggest and teach the fluid mixture consisting of gas, water, and oil; fiber optic cable having windings separated by fiber Bragg gratings are around an outer surface of the pipe.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness.rejections-set-forth-in-this-Office-action:
-

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 and 4-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,502,465 (Vedapuri et al.) in view of either U.S. Patent 6,354,147 (Gysling et al.) or U.S. Patent 6,601,458 (Gysling et al.).

Vedapuri et al. discloses a method and apparatus for determining rate of flow comprising, as illustrated in Figures 1-5, a first speed sound meter G1-G4, L1-L4 coupled to the outside of a first section of a pipe 10 having a first compliancy for determining a first effective speed of sound; a second speed sound meter G1-G4, L1-L4 coupled to the outside of a second section of the pipe 10 having a second compliancy for determining a second effective speed of sound; a signal processor 44 for determining the flow rate of the fluid mixture flowing in the pipe from the first and second effective speeds of sounds. (See, column 5, line 35 to column 10, line 44). The only difference between the prior art and the claimed invention is the signal processor is used for determining density instead of flow rate. The references, Gysling et al. '147 and Gysling et al. '458, disclose sound speed meters and a processor for determining density. (See, column 2, line 59 to column 3, line 9, column 8, lines 4-36 of '147; column 2, lines 32-43, 5, lines 26-39 of '458). It would have been obvious to a person of ordinary skill in the art at the time of invention to have readily recognize the advantages and desirability of determining density in lieu of flow rate from the sound

speed signals since parameters, like flow rate, density and phase fractions, are related to one another and can be easily derive experimentally, analytically or computational from the sound speed signals from one parameter to another parameter.

With regards to claims 2 and 4-25, Vedapuri et al. further suggests and teaches the fluid mixture flowing in the pipe and consisting of gas, water, and oil; the first and second pipe sections are of different thickness, material, and cross-sectional geometries. (See, entire document). Also, Gysling et al. '147 and '458 further suggests

and teaches fiber optic cable having windings separated by fiber Bragg gratings are around an outer surface of the pipe; a housing coupled to an outside surface of the pipe to protect the first and second speed of sound meters. (See, column 16, line 58 to column 18, line 26 of Gysling et al. '147; column 18, line 50 to column 19, line 59 of Gysling et al. '458).

Response to Amendment

6. Applicant's arguments with respect to claims 1-2 and 4-25 have been considered but are moot in view of the new ground(s) of rejection.

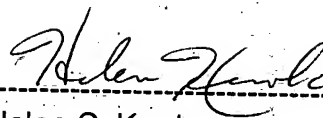
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen C. Kwok
Art Unit 2856

hck
May 13, 2004
